

Remarks/Arguments

Claim Rejections - 35 USC §§102 and 103

The Applicant's invention should not be considered anticipated by Bubien et al (US 5,638,433), because it fails in both inherency and obviousness. I will attempt to reduce the difference between Bubien et al's and the Applicant's invention to clear examples illustrating how prior "Art" fails to anticipate. For a patent to be anticipated it must meet an inherency standard set out in "KROPA v. ROBIE AND MAHLMAN" and obviousness as set out in "Hirao".

Bubien et al's patent (US 5,638,433) as prior Art, has several similarities and distinct differences to the Applicant's invention. First Bubien's patent is dated, in its ability of function in today's tele-communication environment. Bubien's patent only looks at the starting digits of an outgoing phone number to determine if it is a discountable phone number: "However, if the number one (1) or zero (0) and following numbers in the dialing sequence are detected, the numbers are deciphered and stored in memory. The first numbers are noted as area code, or data of the number being dialed" (Col. 3 lines 54 to 58). The Applicant's patent looks at several of the leading dialed digits to determine whether an outgoing call is discountable. This is a key consideration when dealing with a local phone number that requires an area code.

Bubien's patent, as prior Art, does not anticipate the Applicant's invention and should not be used to bar claims in the Applicant's patent application. Bubien et al's patent (US 5,638,433) does perform some similar function as the Applicant's invention, but the overall functionality, structure, and area of operation negate anticipation of what was done by the Applicant.

Bubien's patent not matter how much you modify it, will never work in a wireless environment. Bubien's patent relies on a regular wired environment to execute the calling process once the telephone number is entered. Bubien's patent does not have or allows for a sent / call button (the button that is pressed to execute the dialing process of a wireless device after you have entered a phone number). If Bubien's device were attached to a wireless device in manner similar to that indicated for a wired phone, the send key have to be pressed and this would violate both the specification and claim of his patent (Col. 2 lines 6 to 11 and Col. 5 lines 55 to 64 and Claims 1 & its dependents).

Bubien et al's patent (US 5,638,433) clear illustrate that it is intended to work with wired devices by the fact that it employs "Line Interrupt Switches" in the Diagrams, Specification, and the Claims (Figure 1, and Col. 3 lines 28 to 35 and Claim 15 & its dependents). The fact that Bubien's patent worked with a DTC (Col. 1 lines 58 to 65) to provide access codes discount service provider to user base on their area code and the area code of their call (Col. 1 & 2 lines 65 to 2) proves the difference between Bubien's and the Applicant's patent. Bubien's patent could not work with a wireless device because the user is mobile and their wireless device area code would not have the same meaning as that of a wired (fixed location) phone. If a wireless user is moving about, then what could constitute a local call could become a long distance call, or a long distance call could become a local call. Bubien's patent is further complicated the possibility of applying it to a wireless environment by arranging users into calling groups for better rates (Col.3 lines 11 to 19), but the mobile nature of a wireless device defeats this attempt to get group rates, because mobile users will not always be in the same location when they are

Bubien's patent detects the dialed digit of an outgoing phone call by monitoring the activity of phone line coming from the dialing device (), while the Applicant's invention monitors the activity of the wireless device keypad.

Bubien's patent work by generating DTMF-tones encoding the number for the discount service provider and for re-dialing the outgoing phone number. In many of the new digital phones, DTMF-tones are not used at all, or are only used as indicators to the caller, while electrically encoded digits are transmitted to the communication network. Bubien's goes to great lengths to indicate that DTMF-tones are used to detect and re-direct the outgoing call to a discount service provider. This will not work with a wireless device using today's digital networks and low cost Internet service provider. These differences should negate all consideration of Bubien's anticipating the Applicant's invention. The Applicants invention is targeted at a different form of communication: wireless as to wired. Discount wireless communication has a whole new set of requirement and consideration that have been dealt with successfully by the Applicant.

The above mentioned inherency and obviousness relates to whether a person skilled in the "Art" would eventually come across my methodology over a course of time. The answer to question is no, for no prior "Art" utilizes real or simulated activity of a wireless device keypad to route and outgoing call to a discount service provider. I have yet to find any mention of this feat being attempted in a wireless device and the prior "Art" for wired devices are incompatible with a wireless device.

The unique innovations approach of the Applicant's invention (monitoring the activity of a wireless device keypad to detect an outgoing discountable call), makes the invention's claims patentable because no prior "Art" contain the above mentioned innovations ("Hirao" and "Kropa v. Robie And Mahlman").

1. 535 F2d 67 *; 1976 CCPA LEXIS 162, **; 190 U.S.P.Q. (BNA) 15

IN THE MATTER OF THE APPLICATION OF MAMORU HIRAO AND YOSHINORI SATO
Patent Appeal No. 76-560

UNITED STATES CORT OF CUSTOMS AND PATENT APPEALS

MAY 27, 1976 DECIDED

In "Hirao" it reads on a patent can contain both unique and obvious components, so long as these component are applied in a unique manner they are patentable. There are similar components in both Bubien et al and the Applicant's invention, but there are also different problems to be solve that require innovations that are not obvious to one skilled in the "Art". If the approached taken by the Applicant were obvious, there would be many other patent's utilizing the same methodology. That is to say obvious elements combined with innovation does not preclude obtaining a patent that contains said obvious components so long as they are applied in an unforeseen manner (see cited article or Highlighted section of the enclose document).

2. 38 C.C.P.A. 858; 187 F 2d 150; 1951 CCPA LEXIS 296, *; 88 U.S.P.Q. (BNA) 478, **

KROPA V. ROBIE AND MAHLMAN
Appl. No. 5725

UNITED STATES CORT OF CUSTOMS AND PATENT APPEALS

38 C.C.P.A. 858; 187 F 2d 150; 1951 CCPA LEXIS 296; 88 U.S.P.Q. (BNA) 478

February 6, 1951

In “Kropa v. Robie And Mahlman” it reads on patent inherency, being an absolute outcome of an event. That some one skilled in the “Art” would definitely come upon the Applicant’s approach to routing outgoing calls on a wireless device to a discount service provider (see page 483 in cited article or Highlighted section of the enclose document).

Source: [Legal](#) > /... / > [Federal Court Cases, Combined](#) Terms: [name\(kropa and robie\)](#) ([Edit Search](#))

38 C.C.P.A. 858; 187 F.2d 150;
1951 CCPA LEXIS 296, *; 88 U.S.P.Q. (BNA) 478, **

KROPA v. ROBIE AND MAHLMAN

Appl. No. 5725

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UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

38 C.C.P.A. 858; 187 F.2d 150; 1951 CCPA LEXIS 296; 88 U.S.P.Q. (BNA) 478

February 6, 1951, Decided

DISPOSITION: [*1] Appeal from Board of Interference Examiners of the Patent Office.

Patent interference No. 82123 between Edward L. Kropa, application filed May 21, 1945, and Norman P. Robie and Osborne L. Mahlman, Patent No. 2,369,689, issued Feb. 20, 1945 on application filed Nov. 6, 1941. From decision awarding priority to Robie and Mahlman, Kropa appeals. Affirmed.

CASE SUMMARY

PROCEDURAL POSTURE: Appellant inventor sought review of the judgment of the Board of Interference Examiners of the Patent Office which refused to award appellant a filing date of a prior application which appellant had claimed his current invention was a continuation of and awarded invention priority to appellees.


OVERVIEW: Appellant brought a patent interference action against appellee upon the argument that his application in 1945 was a continuation of his 1938 application and should therefore be accorded priority of appellee's application filed in 1941. The determination rested upon a determination of whether the 1938 application disclosed an abrasive article comprising abrasive grains and a binder of a particular resin or a method of manufacturing the same as disclosed in the 1945 counts. The court found that appellant's 1938 applications did not explicitly or inherently disclose the limitation subject matter of the 1945 counts. The 1938 application was found to not have inherently yielded an abrasive article because such article would not have inevitably resulted under the 1938 application. Therefore, appellees' invention was awarded priority.

OUTCOME: The judgment was affirmed because the court found that appellant's prior application had not explicitly or inherently disclosed the limitation subject matter claimed in his later counts. Therefore, appellee's patent application was prior to appellant's and the award of priority for appellee was found to be proper.

CORE TERMS: abrasive, filler, grain, resin, introductory clause, preamble, carborundum, composition, binder, proportion, patent, sand, invention, recited, subject matter, resinous, silicon carbide, comprising, originated, disclosure, disclose, semble, grit, dust, introductory phrase, comprised, artisan, manufacturing, manufacture, inherently

LexisNexis(R) Headnotes ♦ [Hide Headnotes](#)[Patent Law](#) > [U.S. Patent & Trademark Office Prosecution Procedures](#) > [Interferences](#) **HN1** In an interference proceeding the counts are to be given the broadest

interpretation which their language reasonably will permit, however express limitations appearing in counts are not to be disregarded but must be considered as material. [More Like This Headnote](#)

[Patent Law](#) > [U.S. Patent & Trademark Office Prosecution Procedures](#) > [Interferences](#) 

HN2 Inherency does not mean that a thing might happen, it must inevitably happen for the doctrine of inherency to apply. [More Like This Headnote](#)

COUNSEL: JAMES EDWIN ARCHER, Stamford, Conn., for appellant.

WILLIAM H. WEBB, Pittsburgh, Pa., for appellee.

OPINIONBY: JOHNSON, Judge.

OPINION: This is an appeal from an adverse award of priority in a patent interference proceeding in the United States Patent Office between a patentee and a patent applicant, in which the Board of Interference Examiners rendered a decision in favor of the patentee. The interference involves the appellant's application of May 21, 1945, said to be a continuation in part via mesne applications of his Serial Nos. 248,535-6-7 applications filed December 30, 1938, and appellees' patent No. 2,369,689, dated February 20, 1945, which issued on an application filed November 6, 1941.

The subject matter of the interference counts is an abrasive article and a method of manufacturing the article, in which abrasive grains [*2] are bonded together by a particular kind of synthetic resin. The counts are claims of the Robie et al. patent and were copied by the appellant in his 1945 application. Of the ten counts in issue, counts 1 and 10 are considered illustrative:

1. An abrasive article comprising abrasive grains and a hardened binder comprising the additive reaction product of a substantially neutral unsaturated monomeric material and an un [*480] saturated esterification product of an aliphatic alcohol and a polybasic acid.

10. The method of making a dense abrasive article which is substantially free from porosity which comprises commingling an unsaturated polyester, a substantially neutral unsaturated monomeric material reactive with the said polyester and abrasive grains, shaping an article from the mixture thus prepared, and heating the article to solidify the binder to an infusible state by bringing about an additive reaction between the monomeric material and the polyester to cross-link polyester molecules.

As this contest for priority of invention comes before us, each party relies on its filing date as a constructive reduction to practice of the invention defined by the counts. [*3] The issue before us turns on whether or not appellant's 1945 application may properly be considered a continuation in part of his 1938 applications. The copendency of appellant's 1945 application with mesne applications in turn copending with his 1938 applications is not disputed. Nor is it disputed that the 1938 applications sufficiently disclosed the resins specified by the counts. What is disputed is that the 1938 applications disclose an abrasive article comprising abrasive grains and a binder of the particular resin or a method of manufacturing the same. Each of the 1938 applications is directed to "resinous compositions and processes of producing" them, an object of each being "to prepare improved resins and especially to obtain clear, colorless gels."

Appellant's 1938 applications do not expressly disclose an "abrasive article." In each of the applications, which are voluminous ones, appears the following statement:

Alternatively the reactive resinreactive solvent combination may be mixed with one or more of the various fillers, e.g. wood flour, wood fiber, paper dust, clay, zein, glass wool, mica, granite dust, silk flock, cotton flock, steel wool, carborundum, paper, [*4] cloth, sand, white, black or colored pigments, etc.

Appellant contends that the words "abrasive article" or "abrasive products" in the counts should be given no weight. He states that any combination of abrasive grains and binder is inherently an abrasive article, and since the counts contain no limitations whatever as to the proportions of abrasive grains or binder, the counts should be read in the broadest possible manner. So read, urges appellant, they cover any and all combinations of abrasive grains with the binders specified in the counts. Since his 1938 applications disclose the addition of abrasive grains such as "carborundum," sand, and granite dust to the resins specified by the counts, appellant contends, those applications contain an adequate disclosure of the subject matter of the counts.

In ruling on a motion of appellees to shift the burden of proof, based on the contention that the appellant's 1938 applications do not support the counts of the interference, the Primary Examiner ruled in favor of appellant, sustaining contentions similar to those advanced by appellant here. The Board of Interference Examiners, however, after considering the evidence introduced [*5] by the parties, differed from the conclusion of the Primary Examiner and held that the appellant's 1938 applications do not explicitly or inherently disclose the subject matter of the counts.

The issues presented for our decision are:

I. Does the phrase "An abrasive article" (and the similar term in the process counts) introduce a limitation into the counts?

II. Is a disclosure of "An abrasive article" and method of making the same inherent in the appellant's 1938 applications?

I. ~~HN1~~ In an interference proceeding the counts are to be given the broadest interpretation which their language reasonably will permit, Malm et al. v. Schneider, 26 C.C.P.A. (Patents) 783, 786, 101 F.2d 201, 40 USPQ 364 ; Mantz v. Kronmiller, 35 C.C.P.A. (Patents) 1189, 168 F.2d 100, 77 USPQ 628 ; Osborne v. Patterson et al., 36 C.C.P.A. (Patents) 719, 169 F.2d 817, 79 USPQ 72 , however express limitations appearing in counts are not to be disregarded but must be considered as material. Malm et al. v. Schneider, supra; Saklatwalla v. Marburg, 36 C.C.P.A. (Patents) 791, 172 F.2d 227, 80 USPQ 439 .

Is the phrase "An abrasive article" a limitation upon what follows in the counts in issue?

[*6] This court has often had before it the Jepson problem (243 O.G. 525--1917)--whether the preamble to claims in ex parte cases or to the counts in interference cases should be considered as limitations in the claims or counts. Of the thirty-seven cases of this court we have reviewed with respect to this problem it appears that the preamble has been denied the effect of a limitation where the claim or count was drawn to a structure and the portion of the claim following the preamble was a self-contained description of the structure not depending for completeness upon the introductory clause; or where the claim or count was drawn to a product and the introductory clause merely recited a prop. [*4] 131 erty inherent in the old composition defined by the remaining part of the claim. In those cases, the claim or count apart from the introductory clause completely defined the subject matter, and the preamble merely stated a purpose or intended use of that subject matter. On the other hand, in those ex parte and interference cases where the preamble to the claim or count was expressly or by necessary implication given the effect of a limitation, the introductory phrase was deemed essential [*7] to point out the invention defined by the claim or count. In the latter class of cases, the preamble was considered necessary to give life, meaning, and vitality to the claims or counts. Usually, in those cases, there inhered in the article specified in the

preamble a problem which transcended that before prior artisans and the solution of which was not conceived by or known to them. The nature of the problem characterized the elements comprising the article, and recited in the body of the claim or count following the introductory clause, so as to distinguish the claim or count over the prior art. There is set forth in an appendix to this opinion an analysis of the thirty-seven cases mentioned to which further reference may be made.

In the case before us, the words "An abrasive article" are essential to point out the invention defined by the counts. In our judgment those introductory words give life and meaning to the counts, for it is only by that phrase that it can be known that the subject matter defined by the claims is comprised as an abrasive article. Every union of substances capable inter alia of use as abrasive grains and a binder is not an "abrasive article." The term [*8] calls forth a distinct relationship between the proportions of grain and resin comprising the article. It is important here, as it was in Hall v. Shimadzu, 19 C.C.P.A. (Patents) 1288, 59 F.2d 225, 13 USPQ 259, that the interference counts originated in one party's patent where the entire object of the patent is expressed in the introductory clause of the counts--an objective which nowhere appears in the other party's disclosure (here, appellant's 1938 applications). The term "abrasive article" is a vital term of the counts, and the meaning must be taken from the application in which the counts originated. Kenyon v. Crane, 28 C.C.P.A. (Patents) 1208, 120 F.2d 380, 49 USPQ 707. We hold that it is a limitation which is material to the issue, and must be observed.

II. The above quoted excerpt from appellant's 1938 applications does not inherently disclose an abrasive article. First, the language of that excerpt expressly refers to the enumerated items as "fillers." Thus, though "carborundum" (silicon carbide), sand, and granite dust under some circumstances may be considered as abrasive grains, their enumeration with various other substances not capable of use as abrasive grains, [*9] together with appellant's own characterization of the substances as "fillers" is no suggestion that the resin of his 1938 applications be mixed with any of those substances qua abrasive grains. Ejusdem generis. Secondly, the mixture of the resin with "carborundum," sand, or granite dust in proportions commonly understood as appropriate for the addition of a filler would not inevitably--if at all--yield an abrasive article as that term is understood by the art and indeed contemplated by appellees' patent where the counts originated.

The record fairly establishes that the proportions of silicon carbide, sand, or other substances customarily added to a resinous composition as a filler are distinctly and greatly different than the proportions generally regarded in the abrasive industry as appropriate where "filler" substances, usable as abrasive grains, are mixed as such with a resinous binder to produce an abrasive article. We believe the testimony of the following witnesses preponderates to that effect.

Mr. Boyd H. Work, director of the abrasive engineering department of the Carborundum Company, testified that in commercial practice the relationship between abrasive grain and [*10] bond was 70% grain to 30% bond for vitrified bonds, and 80% grain to 20% bond for resinoid bonds. General industry practice does not differ materially from that of the Carborundum Company, he stated, and of Carborundum's 24,000 items of bonded abrasives, none had less than 70% abrasive grain.

Mr. Work testified that fillers are sometimes used in the manufacture of abrasive articles. Silicon carbide, often referred to in the record as "carborundum," is used both as abrasive grains and as a filler. When used as a filler, silicon carbide is used in fine grain sizes, usually finer than 150 mesh. As a filler, its use is for the purpose of changing the action or bonding characteristics of the bond, and not to abrade or increase abrasion. The relative difference between the grain size of the filler and the abrading grains is considerable. Where filler is used in the manufacture of an abrasive article, the relationship between filler, bond, and

grain is such that the filler will not exceed 50% of the bond, while the proportion of abrasive grain to bond-filler remains as before--not less than 70%. Stock removal by an abrasive article depends, Mr. Work stated, on keeping the **[**482]** **[*11]** bond percentage down and the abrasive percentage high. Filler substances are only added as fine grits, and these fine grits are included in the bond and produce very little cutting action. It is the abrasive grains which protrude beyond the bond to quite a considerable extent which do the cutting--not the grains included in it. Where silicon carbide alone is added in a fine grit or 150 mesh size to the resin, the resulting product might be considered an abrasive article if the percentage of grit is in the range where it becomes an abrasive.

Mr. Frederick Upper, manager of manufacturing technical service for the Carborundum Company, testified that in manufacturing abrasive articles where the abrasive grain is silicon carbide or aluminum oxide, that at the finest grit size of either used for abrasive purposes, the percentage of resin required as a bonding medium would be on the average 12 to 15%. He stated that Carborundum Company had never made resin molded abrasives with more than 20% bond. The reason for the small quantity of bond compared to the quantity of abrasive grain, he explained, was that in most grinding wheels minimum bond is desired as it does little or no cutting. **[*12]** If as much as 50% resin and as little as 50% abrasive grain were used, he did not believe a useful abrasive wheel would result.

Mr. Upper testified that fillers are used in the manufacture of some molded abrasives, in which case the article comprised abrasive grains, filler, and bonding medium. The relationship between the percentage of abrasive grains and the percentage of bond plus filler used remained the same, he stated, as in the manufacture of resin bonded molded abrasives without a filler--not less than 80% abrasive grain.

Dr. Edward L. Kropa, the appellant in this case, an employee of his assignee, the American Cyanamid Company, stated that he had no experience in the abrasive industry as such. He testified that he was in charge of the group working on resins and plastics at American Cyanamid. Resins used in most molding compositions, he stated, require the addition of other materials, such as fillers. The type of resin he was dealing with he described as unusual and often the introduction of small amounts of extraneous compounds would affect the cure. Among the compounds tested as fillers were sand and silicon carbide. Dr. Kropa described a filler as a material usually **[*13]** introduced into a molding compound in order to extend the plastic composition. He stated that it was conceivable that one could extend a material with sand or something of that nature, "but it would be for some secondary purpose rather than a cutting action." After stating that a filler to his way of thinking "is a term which at least by secondary chemical forces of some kind, reacts with the resin binder itself," he said that materials not combining chemically with the resin could be used, but as extenders rather than fillers. When counsel quoted and showed Dr. Kropa the excerpt from one of his 1938 applications, which we quoted in introductory portion of this opinion, stating that the resin defined by the counts "may be mixed with one or more of the various fillers," enumerating various substances including "carborundum," and sand, Dr. Kropa after some interrogation stated that his definition (specifying a chemical combination with the resin as a characteristic of a filler) was of an "ideal" filler, whereas he "was using 'filler' in the common definition in the specification."

Dr. Kropa would not agree with a definition of filler as given in the Handbook of Plastics by Simonds **[*14]** and Ellis, published by D. Van Nostrand Co. in 1943, to the effect that a filler is "An inert material which may be added to a resin or other binder for cheapening or for modifying mechanical properties, or to serve as a base for color effects," but then stated that "If you acknowledge a chemical reaction, it then becomes a part of the binder," adding "If there isn't a chemical combination, then it must be a filler." He admitted that fillers are frequently used to extend the resin, and specified that where fillers are used for such a purpose, the proportion of filler to resin is "Usually in about equal weights." When asked if the percentage of filler is not frequently less than 40 per cent, he replied that "frequently it

can be for certain specific uses," adding, however, that "It is usually around equal weights." He testified that "carborundum" was one of the fillers he disclosed to his patent attorney as a filler which could be employed in his new resin compositions.

Dr. Kropa acknowledged as essentially satisfactory a definition quoted from The Technology of Plastics and Resins, by Mason and Manning, published by D. Van Nostrand Co. in 1945, as follows:

Filler: 35-50 per cent. Materials * * * added for the purpose of extending the resin and then modifying the properties of the finished product.

He indicated, however, that the limits would be within the 50% region (% of filler in the composition).

As to the proportion of abrasive grain to resinous material in an abrasive prod **[**483]** uct, Dr. Kropa's testimony included the following:

XQ 180. Do you know of any abrasive product in which you have, we will say, 30 per cent of abrasive grain, bonded by 70 per cent resinous material?

A. Not in that ratio, no. I believe the abrasive would be considerably higher.

XQ 181. That is the amount of abrasive would be considerably in excess of say, 30 per cent?

A. Seventy of abrasive and thirty of filler would be within shouting distance of it.

It thus appears from the record that the production of an abrasive article by the bonding of abrasive grains with a resin requires as a general rule that the article be comprised of abrasive grains and resin in the proportion of at least 70% abrasive grain and 30% resinous material, whereas the addition of a substance into a resinous composition as a filler is customarily accomplished **[*16]** at the relationship wherein the filler substance is 50% or less of the resin composition. It seems indisputable, therefore, that a resin artisan practicing the suggestion of the appellant's 1938 applications of adding "carborundum" or sand to the resins there disclosed in the proportions customary and appropriate for fillers would not inevitably or necessarily produce an abrasive article as that term is commonly known and understood in the abrasives industry. The disparity between the well known percentage of material to be added to the resin as a filler and that to be added for an abrasive article is too great to admit of the conclusion that an artisan practicing the former would inevitably secure the latter. [7] Appellant's reliance on the doctrine of inherency to transmute his 1938 disclosure into support for the counts at bar is thus a misplaced reliance. ^{HN2} Inherency

does not mean that a thing might happen one out of twenty times. The fact that it might yield an abrasive article is not enough. It must inevitably happen for the doctrine to apply. *Gambalvo v. Detrick et al.*, 35 C.C.P.A. (Patents) 1112, 168 F.2d 116, 77 USPQ 582; *In re Draeger et al.*, 32 C.C.P.A. (Patents) 1217, 171 F.2d 572, 66 USPQ 247; *Hansgig v. Kemmer*, 26 C.C.P.A. (Patents) 937, 102 F.2d 212, 40 USPQ 665.

We conclude, therefore, that appellant's 1938 disclosure does not meet the limitation of the counts, nor will compliance with the suggestion pertaining to the use of "carborundum", sand, etc. as fillers appearing in his voluminous 1938 applications inherently yield an abrasive article. The board was correct in refusing to award appellant his 1938 filing date for a constructive reduction to practice of the subject matter of the counts here in issue. The board's award of priority of invention to appellees must stand, and the decision appealed from is affirmed.

APPENDIX

A. Ex parte cases in which preamble held not to express limitation in claim.

| No. | Case | CCPA (Patent- s) | | F.2d | | USPQ | | Introductory Clause |
|-----|-----------------------------|------------------------|-----------|-----------|-----------|-----------|-----------|---|
| | | Vo- l. | Pa- ge | Vo- l. | Pa- ge | Vo- l. | Pa- ge | |
| 1. | In re Dawe | 19 | 728 | 53 | 543 | 11 | 181 | A driving wheel for tractors and similar agricultural implements |
| 2. | In re Abraham- sen | 19 | 10- 56 | 56 | 871 | 13 | 96 | A moulding scraper |
| 3. | In re Weingart- ner | 19 | 12- 02 | 58 | 442 | 13 | 199 | A stoker-drive power box |
| 4. | In re Garratt | 20 | 878 | 63 | 113 | 16 | 369 | In a device of the class described |
| 5. | In re Wolfe | 21 | 974 | 69 | 550 | 21 | 105 | In a refrigerator cabinet |
| 6. | In re Schoenky | 21 | 10- 52 | 69 | 982 | 21 | 236 | In a shoe-conveying system |
| 7. | In re Beplate et. al. | 22 | 12- 32 | 77 | 506 | 25 | 386 | In a carrying apparatus for use in the drying of a plurality of rows of filaments in skein form |
| 8. | In re Allen | 24 | 10- 66 | 88 | 705 | 33 | 160 | A cutting tool for high speed rotary cutting of non-metallic materials |

[*18]

----- Footnotes -----

a1 semble.

aa1 While the introductory clause may have been considered a limitation, it was not a patentable limitation.

----- End Footnotes -----

| No. | Case | CCPA (Patent- s) | | F.2d | | USPQ | | Introductory Clause |
|-----|------|------------------------|-----|------|-----|------|-----|---------------------|
| | | Vo- | Pa- | Vo- | Pa- | Vo- | Pa- | |

| | | l. | ge | l. | ge | l. | ge | |
|-----|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| 9. | In re Mason | 25 | 873 | 94 | 220 | 36 | 337 | In separating apparatus for separating the silicious and phosphatic constituents of oiled fine mineral phosphates |
| 10. | In re Walker et al. | 26 | 739 | 99 | 976 | 39 | 485 | A blowpipe nozzle for removing surface metal from ferrous metal bodies by reaction with an oxidizing gas stream applied to the surface thereof |
| 11. | In re Crabbs | 25 | 12-14 | 97 | 349 | 37 | 740 | In an asbestos cement shingle |
| 12. | In re Waldron | 28 | 862 | 117 | 381 | 48 | 381 | A rock splitting tool |
| 13. | In re Jannell | 28 | 12-62 | 120 | 10-12 | 50 | 51 | Apparatus for the manufacture of thread or the like in which the thread or the like is at all times accessible from a working face defined as a vertical plane paralleling the longitudinal axis of the apparatus as a whole |
| 14. | In re Stacy | 30 | 972 | 135 | 232 | 57 | 307 | In a fluid operated motor for drawing metal blanks where if the resistance of the blank to the drawing operation suddenly lessens during the drawing operation, the ram element may jump ahead |
| 15. | In re Thuau | 30 | 979 | 135 | 344 | 57 | 324 | A new therapeutic product for treatment of diseased tissue |
| 16. | In re Lamb | 32 | 799 | 146 | 277 | 64 | 241 | In a scaffold of the character described |

- | | | | | | | | | |
|-----|-----------------------------|----|-----------|-----|-----------|----|-----|--|
| 17. | In re Jacobson et al. | 32 | 970 | 148 | 10- 11 | 65 | 425 | Apparatus for selective testing of combustible gases with different ignition temperatures including |
| 18. | In re Rockwell | 32 | 11- 77 | 150 | 560 | 6 | 215 | A power unit for inten- sifying and modulat- ing hydraulic pressure * * * said power unit comprising |
| 19. | In re Hutchison | 33 | 879 | 154 | 135 | 69 | 138 | As an article of manu- facture, adapted for use in the fabrication of a metal template or the like suitable for metal-working opera- tions |
| 20. | In re Dense | 33 | 11- 71 | 156 | 76 | 70 | 212 | A floor mat |
| 21. | In re Benner et al. | 36 | 10- 81 | 174 | 938 | 82 | 49 | A ball mill lining ele- ment |

[*19]

----- Footnotes -----

n1 semble.

----- End Footnotes -----

| No. | Case | CCPA | | F.2d | | USPQ | | Introductory Clause |
|-----|------------------------|------|------|------|------|------|------|---|
| | | Vol. | Page | Vol. | Page | Vol. | Page | |
| 22. | In re Hooker | 36 | 1164 | 175 | 558 | 82 | 190 | In photo-electric target apparatus |
| 23. | In re Hansen et al. | 37 | 1169 | 183 | 92 | 86 | 390 | In apparatus for measuring high frequency power The method of measuring high frequency power by means of a |

** is there a difference between a method claim and a process claim?*

bridge circuit having one element variable in resistance in accordance with excitation thereof

In the foregoing cases (A-1 through 23) the following were the principal reasons advanced for not considering the introductory clause to be a limitation in the claim:

In combination claims the invention must be found in the combination of elements making up the device. [*20] An introductory phrase is merely the title of the invention defined in the part of the claim following that clause. (Case A-1).

The introductory clause merely indicated a field of use different than the field of use of prior art devices, but the structure defined in the body of the claims following the introductory clause pertains to the same art as the prior art devices and is not inventive over that art.

While the field of use of the respective devices differs, the art is the same. (Case A-3).

Where the structure is completely defined independently of the preamble of the claim and can be constructed from the description given, the preamble does not constitute a limitation upon structure but merely states a purpose or intended use of the structure. (Case A-7).

The introductory clause merely recites a property inherent in the old composition defined by the remaining part of the claim. (Case A-15).

In a process claim, where every physical step is anticipated by a reference, the introductory clause stating the purpose of the process is not a limitation, as it is immaterial what purpose the patentee had in mind. (Case A-23).

B. Ex parte cases in which the preamble either expressly or by necessary implication

was considered to be a limitation upon the subject matter defined by the claim.

| No. | Case | CCPA (Patents) | | F.2d | | USPQ | | Introductory Clause |
|-----|----------------|-------------------|-------|------|------|------|------|---|
| | | Vol. | Page | Vol. | Page | Vol. | Page | |
| 24. | In re Fawick | 19 | 11-24 | 56 | 873 | 13 | 92 | In a transmission In an automobile vehicle having a spring supported frame |
| 25. | In re Covey | 20 | 962 | 63 | 982 | 17 | 240 | In a tire |
| 26. | In re Bennett | 20 | 10-87 | 65 | 144 | 17 | 485 | A sheet steel barrel construction for barrels formed of heavy gauge sheet steel and adapted for shipment of heavy contents weighing in the hundreds of pounds |
| 27. | In re Buttolph | 22 | 802 | 73 | 936 | 24 | 85 | A discharge tube for |

| | | | | | | | | |
|-----|------------------|----|------------------------|-----|-----|----|---|---|
| 28. | In re Reichel | 23 | 12- 93 | 84 | 221 | 30 | 74 | positive column light An expansible dia- |
| 29. | In re Krasnow | 33 | 76- 4, 768 -9 | 152 | 969 | 68 | 21- 0, 212 measuring radioactiv- -2- ity within a borehole 13 | phragm device In an apparatus for |

[*21]

In the foregoing cases (B-24 through B-29) the following were the principal reasons advanced for considering the introductory clause a limitation in the claim: The applicant was the first to provide the article described in the introductory clause comprised of the elements recited in the remainder of the claim (Case B-24) the existence of which latter, while previously known was not obviously useful in the environment specified in the introductory clause, and which use solved a problem, the solution of which had been sought for years by the industry (Case B-25). Where there inhered in the article specified in the introductory clause a problem whose solution transcended that before prior artisans, the nature of that problem characterizes the elements comprising the article, recited in the body of the claim following the introductory clause, and distinguishes the claim over the prior art. (Case B-26). The introductory clause constituted an essential element in the novelty of the device and constitutes a limitation in the claim (Case B-27).

----- Footnotes -----

n2 semble.

n3 semble.

n4 semble.

----- End Footnotes----- [*22]

C. Interference cases in which introductory clauses were held not to express a limitation in the counts.

| No. | Case | CCPA (Patent- s) | | F.2d | | USPQ | | Introductory Clause |
|-----|------------------------------|------------------------|-----------|-----------|-----------|-----------|-----------|--|
| | | Vo- l. | Pa- ge | Vo- l. | Pa- ge | Vo- l. | Pa- ge | |
| 30. | Braren v. Horner | 18 | 971 | 47 | 358 | 8 | 455 | In an engraving machine and the like |
| 31. | Deutsch et al. v. Ball | 22 | 13- 22 | 77 | 930 | 25 | 470 | A collapsible top for ve- hicle bodies of the |

| | | | | | | | | |
|-----|----------------------------------|----|-----------|-----|-----|----|-----|--|
| | | | | | | | | cabriolet or convertible coupe type |
| 32. | Marden et al. v. Braselton | 28 | 10- 77 | 119 | 174 | 49 | 256 | An ultraviolet lamp |
| 33. | Bartsch v. Ba- ker | 30 | 919 | 134 | 487 | 57 | 143 | A dish for maintaining food at a desired temperature |

In the foregoing cases (C-30 through C-33) the following were the principal reasons advanced for considering the introductory clause not to be a limitation [*23] in the count: The structure recited in the count following the introductory clause was a self-contained description and did not depend for completeness upon the introductory clause. That clause merely stated the particular use to be made of an otherwise integral apparatus or mechanism (Case C-30).

The structure defined in the counts exclusive of the preamble was a complete and definite invention irrespective of the intended use recited in the preamble (Case C-31).

D. Interference cases in which introductory clauses were expressly or impliedly held

to express a limitation in the counts.

| No. | Case | CCPA (Patents) | | F.2d | | USPQ | | Introductory Clause |
|-----|------------------------|-------------------|--------------------|-----------|-----------|-----------|------------------|---|
| | | Vo- l. | Page | Vo- l. | Pa- ge | Vo- l. | Pa- ge | |
| 34. | Hall v. Shima- dzu | 19 | 1288 | 59 | 225 | 13 | 259 | A process of manufactur- ing a fine powder of lead suboxide inter- mingled with powder of metallic lead |
| 35. | Smith v. Bous- quet | 27 | 113- 6, 1144 | 111 | 157 | 45 | 34- 7, 352 | An insecticide An insecticide composi- tion |
| 36. | Kenyon v. Crane | 28 | 1208 | 120 | 380 | 49 | 707 | A directional indicator for aircraft showing the direction and amount of deviation from course |
| 37. | Lawson v. Davis | 29 | 1217 | 129 | 873 | 54 | 405 | In an article of hosiery A knitted article of ap- parel |

[*24]

In the foregoing cases (D-34 through D-37) the following were the principal reasons advanced for considering the introductory clause a limitation in the counts:

The introductory phrase is absolutely essential to point out the invention defined by the counts. The introductory phrase is necessary to give life, meaning, and vitality to the counts. Also, the counts originated in one party's patent where the entire object of the patent was expressed in the introductory clause of the counts, which objective nowhere appears in his opponent's disclosure. (Case D-34)

The preamble is a limitation where it specifies an article or composition in which there inheres a field of specific use, and the constituents of the article which are recited in the portion of the count following the preamble are old compounds not theretofore known to be useful in such an article. (D-35).

The preamble is an essential element of the invention defined by the counts and not merely introductory for the purpose of explaining the environment in which the other structural elements of the count are designed to be used. Moreover where a vital term of a count is susceptible of more than one interpretation, the meaning [*25] must be taken from the application in which the counts originated. (Case D-36).






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STERNER LIGHTING, INC., et al., Plaintiffs-Appellees, v. ALLIED
ELECTRICAL SUPPLY, INC., et al., Defendant-Appellants

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UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

431 F.2d 539; 1970 U.S. App. LEXIS 7843; 166 U.S.P.Q. (BNA) 454

August 5, 1970

SUBSEQUENT HISTORY: [1]**

Rehearing Denied September 21, 1970.

DISPOSITION:

CASE SUMMARY:

PROCEDURAL POSTURE: Appellants sought review of a judgment of a federal district court that their lamppost base infringed appellees' patent.

OVERVIEW: Appellants had held a patent on "Calso base." Later, appellees made a more effective base by making a stronger and more effective one. In turn, appellants also devised a smaller and stronger lamppost base. Appellees sued appellants for infringement, and the appellants claimed that the patent on appellees' base was invalid because their own "Calso base" **anticipated it, and the innovations** were obvious. On appeal, the court rejected these arguments, and held that appellees' patent was valid. However, the court held that the patent was a highly specific solution to a particular set of problems, and though appellants' new base was similar in operation and result, its means were so dissimilar that the coordination of elements in the synergistic design presented different problems, which had to be solved by its designers. Since the new device did not exhibit substantial identity, it did not infringe appellees' patent.

OUTCOME: The court reversed the judgment of the trial court, holding that the patent on the lamppost base

was valid, but that appellants' device did not infringe the patent.

CORE TERMS: patent, pole, flat, anticipation, infringement, electrical, plate, obviousness, patentee, invalid, invention, lamp-post, smaller, bottom, hinge, patented device, edge, synergistic, base plate, ventilation, infringing, pedestal, patented, hinged, skirt, knobs, anticipated, narrowly, solved, skill

LexisNexis(R) Headnotes

Patent Law > Novelty & Anticipation

[HN1] Anticipation is largely a question of fact. A jury verdict on the factual issue of anticipation will not be overturned unless fair-minded men could not disagree as to a contrary result.

Patent Law > Infringement > Acts of Infringement

[HN2] One key to the question of obviousness is whether the patentee has solved non-trivial technical problems by purposefully manipulating variables so as to elicit a synergistic result from his materials.

Patent Law > Infringement > Acts of Infringement

[HN3] A presumption of validity attaches to patents that have survived the scrutiny of the Patent Office, and therefore the courts must construe those claims narrowly so as to avoid anticipation and obviousness if that is at all possible.

Patent Law > Infringement > Acts of Infringement

[HN4] It is the claims of the patent, and not any particular device manufactured by the patentee, to which a court must look to determine the validity of the patent.

Those claims must adequately and specifically describe a patentable invention.

Patent Law > Jurisdiction & Review > Standards of Review

[HN5] Whether a patent is infringed is primarily a question of fact. Appellate courts are extremely reluctant to overturn jury findings on the issue of infringement, and will do so only if those findings contain a clear error of law or fact. But there are rare cases in which an appellate court may consider infringement directly. One such case is that in which the construction of the patent, itself a question of law, is the main determinant. In a situation requiring appropriate application of standards of law to facts largely undisputed, there is no necessity for remand even where a court reverses an issue usually regarded as one of fact.

Patent Law > Infringement > Acts of Infringement

[HN6] A device infringes a patent if it exhibits substantial identity with the patented device as to means, operation and result. A combination patent is not infringed unless the accused device is substantially identical to the patent in all the elements that are essential to the combination.

Patent Law > Infringement > Claim Interpretation

[HN7] Usually a patent will not be so strictly construed that it is held to the strict device described by the claims or shown through the drawing. However, the narrowness of the invention may require a narrow construction.

JUDGES:

John R. Brown, Chief Judge, Gewin and Thornberry, Circuit Judges. John R. Brown, Chief Judge (concurring in part and dissenting in part).

OPINIONBY:

THORNBERRY

OPINION:

[*540] THORNBERRY, Circuit Judge:

The subject of this patent-infringement suit is lamp-post bases. The trial court held appellees' patent on their lamp-post base valid and found appellants liable for infringement. On this appeal, we agree with the trial court that the patent was valid, but we find the judgment of infringement to be based upon an overly generous reading of the claims, and accordingly we reverse and render judgment for appellants.

Both companies have been in the lamp-post base business for a number of years. Before either the patent

at suit issued or the allegedly infringing device was marketed, Pfaff & Kendall, manufacturer of the accused device for appellant Allied, manufactured a device called the "Calso base." Although it never achieved a high degree of commercial success, the Calso base embodied a number of advantageous ideas, some of which were old and some new. The essential feature of the base was a hinge attached to its bottom that [*2] allowed the entire pole to swing down to the ground for easy installation and maintenance of lamps (see Figure 1). The base itself was a hollow pedestal, terminating at its upper end in a pole. It had a removable plate that allowed access to the transformer and wiring inside. The Calso base was used mainly in the middle and late 1950's, but its bulk and lack of strength caused it to have disadvantageous properties that in turn induced Allied to discontinue merchandising it.

The patented base, which Allied is accused of infringing, is manufactured by Sterner Lighting, Inc., one of the appellees. Sterner filed its application in 1960 and began at that time to merchandise its base, which proved highly successful commercially. This base is stronger and smaller than the Calso device, partly because the electrical components that must go into it had been more carefully developed by 1960 and were themselves smaller. The base is a flat plate attached to the bottom of the pole, hinged at one edge, with a short border hanging down and supported on the edge opposite the hinge by two knobs coming out of the foundation (see Figure 2). The device can be easily operated by one or two men. [*3] Its sales rose from approximately \$1,000 in 1960 to nearly \$2,000,000 in 1967.

About 1964 Pfaff & Kendall and its customers began to feel pressure from the success of the Sterner device. Builders and architects engaged in area lighting projects had begun to specify the Sterner base to an extent that it was cutting into Allied's customers' markets. One of Pfaff & Kendall's sales managers requested that Pfaff & Kendall's engineering department construct a base that would have the advantageous characteristics of the Sterner device. Engineering replied with the suggestion that Pfaff & Kendall use the old Calso base, to which a Pfaff & Kendall marketing manager replied, "This base is a killer. It can get away. That is one reason it is no longer used." Thus there can be no question that it was in response to competition from the Sterner device that Pfaff & Kendall developed the base (sold by it to Allied) that is here accused of infringing the Sterner patent (see Figure 3). Pfaff & Kendall was clearly trying to reproduce the advantageous [*541] features of that device. The Allied base shares common characteristics with the Sterner base: It is short and low to the ground, it [*4] necessitates placement of the electrical essentials in the pole, and it consists, in

part, of a flat plate at the bottom of the pole horizontal to the ground and attached to the hinge. Like the Sterner base, it is light, strong, and easy to operate.

The question of validity of the patent is the first one we must consider, because of the deep public interest in the existence of patent monopolies. *See Beckman Instruments, Inc. v. Chemtronics, Inc.*, 5th Cir. 1970, 428 F.2d 555. Allied argues that it is invalid both because it is obvious and because it is anticipated by the prior art. After consideration of this question, we take up the second issue in the case, which is whether the Allied device infringes the claims of the patent when those claims are properly construed.

I. VALIDITY OF THE PATENT AND CONSTRUCTION OF ITS CLAIMS

A. Anticipation

Appellant Allied first argues that the patent is invalid because it was anticipated by the Calso device. The Calso base and the patented invention of course have some characteristics in common, most notably the hinge, but there are also major elements that make the patented device a different invention from Calso. [**5] These differences are the essence of the patent. Sterner's licensor, in describing the patent in the trial court, pointed out the following differences between it and the prior art: (1) The base plate is flat and attached to the bottom of the pole and bolts around its edges are used to keep it down. (2) The ballast (that is, the weighting material, which also happens to be the electrical equipment) is in the pole itself rather than in the base. (3) Ventilation space is provided at the bottom. (4) The sides of the base are covered by a skirt attached to the base plate (5) "Bosses," or knobs, from below, hold up the edge of the base plate that is not supported by the hinge.

In order to show anticipation, Allied's witnesses attempted to show that the Calso device embodied equivalents of all these characteristics. For example, testimony equated the sides of the Calso pyramidal base with the pole on the patented device, in order to show that the ballast in Calso was also in the pole. The trouble with this approach is that the Calso pedestal base is different from a pole in structure: It is bigger, heavier, and not as strong. Similarly, the testimony equated the sides of the Calso [**6] pedestal, several feet high, with the skirt surrounding the patented device, which is only a few inches high. These elements serve the same functions in the two devices, but again they are structurally different. The jury found against Allied on the issue of anticipation.

[HN1] Anticipation is largely a question of fact. *See Graham v. John Deere Co.*, 1965, 383 U.S. 1, 86 S. Ct. 684, 15 L. Ed. 2d 545; *Swofford v. B & W Inc.*, 5th

Cir. 1968, 395 F.2d 362; *American Fidelity & Cas. Co. v. Drexler*, 5th Cir. 1955, 220 F.2d 930, 932-933. There are cases in which anticipation depends so heavily upon issues of law that it may be reviewed directly by an appellate court, but this is not such a case. *Cf. Beckman Instruments, Inc. v. Chemtronics, Inc.*, *supra*. A jury verdict on the factual issue of anticipation will not be overturned unless fair-minded men could not disagree as to a contrary result. We hold that the jury's finding that the patent was not anticipated by the Calso device is not reversible on this appeal.

B. Obviousness [**7]

Allied also urges that the patent is invalid because the innovations that make it what it is would be obvious to a person possessing ordinary skill in the art. Obviousness is a difficult, elusive standard to apply. The Supreme Court has recently dealt with the concept in several opinions. In one such case, *United States v. Adams*, 1965, 383 U.S. 39, 86 S. Ct. 708, 15 L. Ed. 2d 572, the Court considered a patent on a special kind of battery. [*542] The patent specifically described the components and their relation to each other. The components were all known, but the combination was a specific solution to technical problems that required the exercise of some skill because the components had to be chosen so that they worked together. The Court therefore held the patent valid. By contrast, in *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 1969, 396 U.S. 57, 90 S. Ct. 305, 24 L. Ed. 2d 258, the Court held a patent on a device to lay asphalt pavement invalid. The device was the first successful machine of its kind. But it was merely a combination of known elements that produced no synergistic result, to which the patentee had contributed no [**8] novel arrangement. His patent was invalid because it required him to do nothing but adopt known components, and it was not saved by the fact that no one had ever so used them before. *See also Graham v. John Deere Co.*, *supra*; *cf. Beckman Instruments, Inc. v. Chemtronics, Inc.*, *supra*. Our question on this appeal is whether the Sterner patent is closer to the *Adams* or to the *Anderson's-Black Rock* situation, and it appears from the decisions that [HN2] the key to this question is whether the patentee has solved non-trivial technical problems by purposefully manipulating variables so as to elicit a synergistic result from his materials.

Allied, the accused infringer, has advanced an appealing argument that the patent is actually obvious. It contends that since the main problem exhibited by the known-art devices was their bulkiness and weight, the solution Sterner came up with -- namely, making the base smaller -- is obvious. Also, they point out that putting the electrical components in the pole rather than in the base does not solve a very sophisticated [**9]

technical problem, especially since the electrical components are in the same place they would be in the Calso prior-art base if that base were shaped as the Sterner base is. There is a good deal of force to this argument, and if recognizing these characteristics were all there was to construing the patent, it would not be valid.

In applying the substantive standards of patentability to the invention in this case, however, we must follow established principles of patent construction. [HN3] A presumption of validity attaches to patents that have survived the scrutiny of the Patent Office, and therefore the courts must construe those claims narrowly so as to avoid anticipation and obviousness if that is at all possible. 35 U.S.C. § 282 (1954); *Helms Prod. v. Lake Shore Mfg. Co.*, 7th Cir. 1955, 227 F.2d 677, 680; *Williams Mfg. Co. v. United Shoe Mach. Corp.*, 6th Cir. 1941, 121 F.2d 273, *aff'd* 316 U.S. 364, 62 S. Ct. 1179, 86 L. Ed. 1537. And it is to be emphasized that [HN4] [**10] it is the claims of the patent, and not any particular device manufactured by the patentee, to which we must look. *Beckman Instruments, Inc. v. Chemtronics*, *supra*; *Hensley Equip. Co. v. Esco Corp.*, 5th Cir. 1967, 383 F.2d 252. Those claims must adequately and specifically describe a patentable invention. Thus it happens as a practical matter that patents claiming narrow, specific inventions are more likely to withstand attack on anticipation or obviousness grounds than patents that make broad, general claims, however humble or exalted the actual product of the inventor's mind may have been.

As a consequence of these principles, we are able to hold that the patent in suit, which is not broad and general but is a highly specific solution to a particular set of problems, is not invalid for obviousness. It may be true that the relevant art is not highly sophisticated. The invention itself is not very sweeping or impressive. It may likewise be true that the main problem involved, which is that prior bases were too big, is not difficult to apprehend. And we may agree that if Sterner had simply written a patent that claimed any and all bases that solved [**11] this problem by making the base smaller, that patent would be invalid for obviousness. The relevant fact, however, is that the patentee has specified the solution [**14] in detail rather than merely stating that the base should be made smaller. In doing so, he was required along the way to solve some technical problems whose solution would probably not be obvious to a person of ordinary skill in the art. For example, the base plate is a flat plane and the pole intersects it perpendicularly at the point of joinder. The Calso base has no such plate; the sides of its pyramidal pedestal join the pole at an angle. The flat planar base apparently makes for a lower profile, less weight, less bulk, and

greater strength. We cannot say that this is an obvious way to make a successful base. Also, rather than being connected to the ground on all four sides, the patent has supporting knobs on the side opposite the hinged edge, and a skirt hangs down over the opening between the flat plate and the foundation. This design preserves strength and simplicity without bulk, and we are told by the patentee, with the approval of the Patent Office behind him, that it also allows easy access to [**12] the electrical components and provides space for ventilation. All components of the base are coordinated with all other elements to produce these synergistic results. The essential characteristic of the patent is that all elements are specifically described, and coverage can be narrowly confined to the device the patentee actually invented. The patent therefore describes a unique, nonobvious solution to a problem rather than a general idea, which might well be nonpatentable on obviousness grounds.

Of course, a necessary concomitant of the construction we have followed in order to hold the patent valid is that the claims do not cover any invention other than the narrow one they specifically describe. The patent cannot cover all small lamp-post bases, or all lamp-post bases that locate the electrical components in the pole, or all lamp-post bases that avoid the disadvantages of the Calso base. It covers only those bases that solve the relevant problems in the way it describes, containing all elements it describes, arranged in the way it describes. Thus the construction we have been required to place upon the patent intimately affects the issue of infringement. Since we have thus [**13] disposed of the issue of validity, we now pass on to consider whether the patent is infringed.

II. INFRINGEMENT

[HN5] Whether a patent is infringed is primarily a question of fact. *National Athletic Supply Corp. v. Tone-O-Matic Prod., Inc.*, 5th Cir. 1970, 421 F.2d 407; *Noe v. Smith*, 5th Cir. 1962, 300 F.2d 430; *United States Industries, Inc. v. Otis Engineering Corp.*, 5th Cir. 1958, 254 F.2d 198. Appellate courts are extremely reluctant to overturn jury findings on the issue of infringement, and will do so only if those findings contain a clear error of law or fact. But there are rare cases in which an appellate court may consider infringement directly. One such case is that in which the construction of the patent, itself a question of law, is the main determinant. In a situation "requiring appropriate application of standards of law to facts largely undisputed, * * * [there is] no necessity for remand" even where a court reverses an issue usually regarded as one of fact. *National Filters, Inc. v. Research Prod. Corp.*, 5th Cir. 1967, 384 F.2d 516, 518; [**14] *see also Reynolds-Southwestern Corp. v. Dresser Industries, Inc.*, 5th Cir. 1967, 372 F.2d 592, 595. In this case, we find that the construction we have

been required to place upon the patent enables us to decide the issue of infringement as one of law.

As we have stated, there can be no question that the allegedly infringing device was developed in response to the success of the Sterner patented base. This may be some evidence of the validity of the patent, but it is not particularly strong evidence even as to that, and it has no relevance to the question of infringement. Indeed, evidence that an alleged infringer produced his device in response to the success of a patented invention may well be misleading, since every person has the right to compete with the producer [*544] of a patented device if only he obtains his results by means different from those of the patented object. This kind of competition, in fact, is especially to be encouraged, since a patent confers a limited monopoly and allows its holder to exact what is in effect a tax upon the public. Accordingly, the more reliable guide is inspection of the patent and the accused device themselves. [**15]

[HN6] A device infringes a patent if it exhibits substantial identity with the patented device as to means, operation and result. *McCutchen v. Singer Co.*, 5th Cir. 1967, 386 F.2d 82; *Foster Cathead Co. v. Hasha*, 5th Cir. 1967, 382 F.2d 761. A combination patent is not infringed unless the accused device is substantially identical to the patent in all the elements that are essential to the combination. *Reed v. Parrack*, 5th Cir. 1960, 276 F.2d 784, 788. It is quite clear that this identity is not present here, given the narrow construction we must apply to the patent. Results obtained by the two devices may be similar since both are hinged lamp bases with low profile, light weight, and easy access to the interior; and operation is similar also. But the bases are structurally different enough that the co-ordination of elements in the synergistic design clearly presented different problems that had to be solved by its designers. Thus different means are employed by the two bases.

We may point out some of the differences by describing them briefly. Instead [**16] of the skirt hanging down from the flat upper plate to cover the sides of the base, the accused device has merely a flat plate, and the sides are covered by a bowl-like lower section that comes up from the foundation. The bowl-like sides of the lower section serve the function of the knobs that protrude from the foundation of the Sterner device and keep the flat upper plate horizontal. As a result, the weight of the base is different, as are its ventilation characteristics. The accused device employs a different means of joining the base to the pole, with an angular collar above the flat plate surrounding the pole, and it is to this collar that the hinge is attached. Making this structure exhibit the characteristics that the Sterner device exhibited -- strength, light weight, ventilation, room for all electrical components, attractiveness --

posed different structural problems from those posed by the patented Sterner device itself. It may be that they are not highly difficult or sophisticated problems, but if that is so neither were the problems behind the Sterner base once one apprehended the general idea that the base could be made smaller. The differences, furthermore, are [**17] significant. They are of the same character as those used by Sterner to distinguish the prior art. A patent may not, like a "nose of wax," be twisted one way to avoid anticipation and another to find infringement. *White v. Dunbar*, 1886, 119 U.S. 47, 51, 7 S. Ct. 72, 74, 30 L. Ed. 303; *Permo Inc. v. Hudson-Ross, Inc.*, 7th Cir. 1950, 179 F.2d 386. As a consequence of the required narrowness of the claims, we find as a matter of law that the accused device is not substantially identical to the patent.

This construction of the patent so as to confine it narrowly to the precise device it describes doubtless renders it of substantially less value than a broader patent could have. [HN7] Usually a patent will not be so strictly construed that it is held to the strict device described by the claims or shown through the drawing. *See Edward Valves, Inc. v. Cameron Iron Works, Inc.*, 5th Cir. 1961, 286 F.2d 933; *Abbott v. Barrentine Mfg. Co.*, N.D.Miss.1966, 255 F. Supp. 890. In this case, however, it is the narrowness of the invention that requires [**18] the narrow construction. The patent is a limited one in a crowded art. The patentee cannot expect a roving commission to run off all effective competition and tax the public for all uses of a broad idea merely because he has devised a limited invention employing that idea.

Reversed.

[*545] APPENDIX

[SEE FIGURE 1 IN ORIGINAL]

Prior Art: The "Calso Base"

[*546] [SEE FIGURE 2 IN ORIGINAL]

The Patented Sterner Base

[*547] [SEE FIGURE 3 IN ORIGINAL]

The Allegedly Infringing Base Manufactured by Pfaff & Kendall for Allied

CONCURBY:

BROWN (In Part)

DISSENTBY:

BROWN (In Part)

DISSENT:

JOHN R. BROWN, Chief Judge (concurring in part and dissenting in part):

I concur fully in the opinion and decision that there is no infringement. I respectfully dissent as to validity. I see no invention on any standard. The problem was a light pole which could be "collapsed" for maintenance. This called for a hinged base and the electrical circuitry

to be readily available when the pole was lowered from the vertical. All Sterner did was take advantage of technological advances in the lighter materials for base and pole and, more important, in electronic circuitry which enabled [**19] all to be enclosed within the radius of the pole itself at the bottom end. Not much, if any, is now left but what there is, is too much.

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535 F.2d 67, *; 1976 CCPA LEXIS 162, **;
190 U.S.P.Q. (BNA) 15

IN THE MATTER OF THE APPLICATION OF MAMORU **HIRAO** and YOSHINORI SATO

Patent Appeal No. 76-560

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

535 F.2d 67; 1976 CCPA LEXIS 162; 190 U.S.P.Q. (BNA) 15

May 27, 1976, DECIDED.

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Technology Center 2600**PRIOR HISTORY:** [****1**] Serial No. 839,689.**CASE SUMMARY****PROCEDURAL POSTURE:** Appellant applicants challenged the decision of the Patent and Trademark Office Board of Appeals that rejected their patent application.**OVERVIEW:** Appellant applicants developed a process for sweetening foods and drinks comprised of three steps. The Patent and Trademark Office Board of Appeals (Board) rejected the application on the basis of the third step being obvious - notwithstanding the first two steps. On appeal, the court reversed because it held that the Board improperly rejected the whole claim as obvious based upon the last step. The obviousness must be determined as a whole.**OUTCOME:** The court reversed the holding of the Board because it held that the process was nonobvious as a whole.**CORE TERMS:** maltose, purity, food, product-by-process, unobvious, invention, drink, sweetening, preamble, agreed statement, subject matter, obviousness, composition, recited, preparing, sweetener, teaching, amylose, forming, recite, adding, three-step, asking, skill, certified copy, crystalline, sweetened, comprises, analogy, mildly**LexisNexis(R) Headnotes** ♦ [Hide Headnotes](#)[Patent Law > U.S. Patent & Trademark Office Prosecution Procedures](#)**HN1** ♦ See Rule 5.5.**OPINIONBY:** MILLER**OPINION:** [***67**]

MILLER, Judge.

This appeal is from the decision of the Patent and Trademark Office Board of Appeals affirming the rejection of claims 1-4, 10, 17-19, 21, 22, and 24-26 in application serial No. 839,689, filed July 7, 1969, for "Process for Preparing Food and Drinks." We reverse.

The Invention

The invention involves a process of sweetening foods and drinks. The process comprises three steps, the first two being a method of forming a high purity maltose product (which is the sweetening agent) and the third being the use of this product to sweeten the food or drink. Claim 1, the sole independent claim, is illustrative (paragraphing and numbering added):

1. A process for preparing foods and drinks sweetened mildly, and protected against discoloration, Strecker's reaction, and moisture absorption, which comprises:

[1] adding [*] and [*] under such conditions and in a quantity sufficient to produce straight chain amylose, to enzymatically liquefied starch which consists essentially of **[*68]** amylopectin thereby producing straight-chain amylose;

[2] subjecting the resulting amylose to the action of [*] and purifying **[**2]** and drying to obtain high purity maltose in crystalline powder form of 90 - 95% maltose; and then

[3] adding said high purity crystalline maltose powder to foods and drinks as the essential added sweetener.

The Board's Opinion

The board, in a new ground of rejection under 37 CFR 1.196(b), found that all of the claims now before the court would have been obvious under 35 USC 103 in view of Jacobs (Jacobs, Chemistry and Technology of Food and Food Products 67-70 (1951)) together with Kjolberg (Kjolberg et al., Studies on Carbohydrate Metabolizing Enzymes, 86 J. BIOCHEMISTRY 258-62 (1963)). (The references are discussed infra under "Agreed Statement.") The board stated:

We wish to make it clear that while appellants' method of making high purity maltose appears to be unobvious based on the art of record before us, the method of sweetening food products with high purity maltose would be obvious from the teaching of Jacobs in view of Kjolberg.

In response to a request for reconsideration, the board further stated:

We note that appellants concede that the method of sweetening food products with high purity maltose would be obvious from the teachings of Jacobs in view of **[**3]** Kjolberg et al. As to claim 1, it is our considered opinion that, regardless of the process employed in preparing high purity maltose, it is obvious to use such high purity maltose in sweetening food products.

Agreed Statement

This appeal comes before the court on an agreed statement of the case n1 under court Rule 5.5. n2 The following facts, among others, have been stipulated:

n1 See In re Hirao, 525 F.2d 1066, 188 USPQ 248 (CCPA 1975).

n2 **HN1** Rule 5.5:

When the questions presented by an appeal to this court can be determined without an

examination of all the pleadings, evidence, and proceedings below, the parties may submit an agreed statement of the case in lieu of the record as required by Rule 3.3(b) showing: (1) how the questions arose and were decided in the tribunal from which the appeal is taken; (2) the facts averred and proved or sought to be proved which are essential to a decision of the questions by this court; and (3) a concise statement of the issues to be decided and the points to be relied on by appellant. The statement shall be accompanied by a certified copy of the judgment or ruling appealed from and a certified copy of all opinions, if any, in support thereof. **[**4]**

9. Claim 1 is an independent claim on which each of the remaining appealed claims depends, directly or indirectly.

10. The rejection of dependent claims 2 to 4, 10, 17 to 19, 21, 22 and 24 to 26 will stand or fall with the rejection of claim 1.

11. The sole issue to be decided by the present appeal is whether claim 1, and all those claims dependent therefrom, are obvious in the sense of 35 USC 103 over Jacobs in view of Kjolberg.

...

13. The Kjolberg reference teaches one process of making high purity maltose.

14. The Jacobs reference generally teaches that certain undefined maltose products may be used for sweetening food products.

15. Appellants' steps of making high purity maltose, which appear as the first two steps in claim 1 ..., are novel and unobvious based on the art of record.

16. Appellants' step of adding high purity maltose to foods and drinks as the essential added sweetener, which appears as the third step in claim 1, ... would be obvious from the teachings of Jacobs in view of Kjolberg.

OPINION

As stipulated, the first two steps (forming high purity maltose) would have been unobvious from the art of record, while the **[*69]** third **[**5]** step (using high purity maltose as a sweetener) would have been obvious in view of Jacobs together with Kjolberg. Moreover, the Solicitor has stated - without contravention by appellants - that the high purity maltose product formed by the first two steps and the high purity maltose product of the prior art "may be considered the same as far as the process and use recited in the preamble and step [3] of claim 1 are concerned." Thus, the single issue is whether appellants' three-step process is obvious, the first two steps being unobvious but forming a known product, and the third step being the use of this known product in an obvious way. We conclude that due to the admitted unobviousness of the first two steps of the claimed combination of steps, the subject matter as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made. Cf. *In re Mancy*, 499 F.2d 1289, 182 USPQ 303 (CCPA 1974); *In re Kuehl*, 475 F.2d 658, 177 USPQ 250 (CCPA 1973).

The Solicitor argues that Kuehl and its progeny (including Mancy) are distinguishable, "inasmuch as the Court was there concerned with the obviousness of processes of using unobvious products," **[**6]** while here "the person of ordinary skill in the art has already been given the obvious, high purity maltose produced by other processes." However, this factual distinction does not preclude the applicability to the present case of the reasoning of Kuehl, where this court said (*supra* at 664-65, 117 USPQ at 255):

[We] think [In re Saunders, 33 CCPA 1001, 154 F.2d 693, 69 USPQ 341 (1946)] no longer represents viable law to the extent that it supports the broad proposition that the obviousness of process claims drawn to a method of using a composition is determined by asking ... whether "given" the composition the claimed process of use would be obvious. The test under § 103 is whether in view of the prior art the invention as a whole would have been obvious at the time it was made, and the prior art here does not include the zeolite [the unobvious composition used] ... [Footnote omitted.]

Similarly here, it is improper to determine obviousness by merely asking whether, given the product of the two unobvious claimed steps, the third claimed step of using the product would have been obvious. The obviousness of the invention as a whole must be determined, and the unobvious **[**7]** first two steps are clearly part of the invention as a whole.

The Solicitor urges that the board committed no error in refusing to give weight to the specific method of making the high purity maltose. He analogizes the present claims to product-by-process claims, stating that "claim 1 may properly be viewed in short hand [sic] form as a 'process of using a product-by-process' claim," and argues that the method limitations of the first two steps should be given little or no weight. A product-by-process claim, although reciting the subject matter of the claim in terms of how it is made, is still a product claim. As this court said in In re Brown, 59 CCPA 1036, 1041, 459 F.2d 531, 535, 173 USPQ 685, 688 (1972):

[In] spite of the fact that the claim may recite only process limitations, it is the patentability of the Product claimed and not of the recited process steps which must be established.

Here, a three-step process is claimed - not the product formed by two steps of the process or the third step of using that product. Thus, the analogy to product-by-process claims is inapposite. n3

n3 At oral hearing, the Solicitor pointed out that some courts in infringement suits have construed product-by-process claims as covering only a product made by the particular process set forth in the claims (see In re Bridgeford, 53 CCPA 1182, 1186 n.5, 357 F.2d 679, 682 n.5, 149 USPQ 55, 58 n.5 (1966)), and argued that these courts would treat the "process of using a product-by-process claim" and the present claims in the same manner. This court, however, as recognized by the Solicitor, does not construe product-by-process claims in an ex parte case as limited to the product formed by the specific process recited. In re Avery, 518 F.2d 1228, 186 USPQ 161 (CCPA 1975). If it did, the Solicitor's analogy to product-by-process claims would fall under its own weight. **[**8] [*70]**

The Solicitor points to the preamble of claim 1, which recites a "process for preparing foods and drinks sweetened mildly," as showing that the subject matter as a whole involves the use of an old sweetening agent in a very obvious manner. However, the preamble merely recites the purpose of the process; the remainder of the claim (the three process steps) does not depend on the preamble for completeness, and the process steps are able to stand alone. See Kropa v. Robie, 38 CCPA 858, 187 F.2d 150, 88 USPQ 478 (1951). The Solicitor's interpretation of the preamble would improperly broaden the scope of the claim.

In view of the foregoing, we hold that the subject matter as a whole would not have been obvious at the time the invention was made.

The decision of the board is reversed.

REVERSED

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